

of the patients alluded to, there was no delusion or insanity, other than that which might exist in regard to the so-called "spiritual manifestations."

Forty-eight of the patients admitted had the suicidal propensity. Thirty-five of them had attempted self-destruction. Of the thirty-five, thirteen had recovered from their mental disease at the close of the year.

	Men.	Women.	Total.
Whole number of patients, 1839 to 1853, inclusive	1220	1135	2355
Discharged recovered	601	570	1171
Died	188	135	323

Diseases which proved Fatal.—"Exhaustion and general decay, without discoverable local lesion, 56; consumption, 52; dysentery, 31; diarrhoea, 30; epilepsy, 28; fever, 28; inanition, 26; apoplexy, 16; palsy, 9; inflammation of the lungs, 7; dropsy, 6; inflammation of the brain, 4; inflammation of the liver, 3; chronic inflammation of the peritoneum, 3; tabes mesenterica, 3; suicide, 3; inflammation of the pericardium, 2; inflammation of the stomach, 2; erysipelas, 2; organic lesion of the brain, 1; caries of the vertebrae, 1; chronic inflammation of the bronchia, 1; bilious colic, 1; ulceration of the bowels, 1; inflammation of the kidney, 1; cancer of the womb, 1; cutaneous cancer, 1; gangrene of the face, 1; exhaustion from journey, 1; confluent smallpox, 1; cause not assigned, 1."

The State Legislaturo has made appropriations for warming the buildings by steam, in connection with forced ventilation, and for the construction of an infirmary.

P. E.

ART. XII.—*Report of the Select Committee of the Senate of the United States on the Sickness and Mortality on board Emigrant Ships, August 2, 1854.* 8vo. pp. 147.

THE present report is that of a select Committee appointed under an order of the Senate of the United States, passed on the 7th of December, 1853, "to consider the cause and the extent of the sickness and mortality prevailing on board of emigrant ships on the voyage to this country; and whether any and what legislation is needed for the better protection of the health and lives of passengers on board of such vessels." To which Committee were also referred a petition of the American Medical Association, and a petition of inhabitants of New York, in relation to the same subject.

The Committee appear to have given to the task entrusted to them, all that attention which its importance, as well with reference to the business interests of the country as to the cause of humanity at large, demands.

"With a view to the procuration of accurate data from which to form a correct judgment, a circular was prepared, containing fourteen questions relative to the police, and sanitary management of emigrant ships, to which specific answers, based as far as practicable upon experience, were requested. Copies of this circular were addressed and sent to members of the medical profession (whose opportunities of forming correct opinions on the subject had been furnished by experience, and therefore are entitled to consideration), to merchants, to navigators who had been engaged in the passenger trade, to persons connected with the collection of the customs, to presidents of benevolent societies for the relief of indigent emigrants, and to others throughout the country, and in the cities at which the landing of foreign passengers has chiefly taken place."

The answers received to these circulars were very numerous, and, in many instances, are drawn up with great ability, furnishing materials in abundance for a most interesting report; and such the one before us unquestionably is.

It is well known that the sickness and mortality that has prevailed, for many years past, on board of emigrant ships arriving at the different ports of the United States, has been, in many instances, to an extent truly appalling.

Nor is it at all surprising that typhus fever, and cholera, and smallpox should occur, in their most malignant forms, among the passengers on board of emigrant vessels, destroying, every year, many thousands during the voyage, and as many more subsequent to their arrival here, when we consider the impaired health, the squalid and depressed condition of a large number of the emigrants when they enter on board, the over-crowded condition of the vessels, the want of adequate ventilation, the too general inattention paid to cleanliness, the badly cooked food—itsself, frequently, of an inferior quality—the neglect of exercise and of a proper sanitary police generally, throughout the voyage.

From the returns received by the Committee of the Senate, it appears that the percentage of mortality among the passengers on board of New York vessels has been considerably greater than among those on board of vessels trading to Boston and other ports.

"This," in the words of the report before us, "might have been, perhaps, expected, for a variety of reasons. New York being the great commercial emporium of the Union, passengers from every country in Europe have been induced to regard it as the point to which they should direct their courses. Hence, the huge structures, furnished by the enterprise of that great metropolis for the transportation of passengers, have been crowded to excess, and, as a necessary consequence, the causes of disease have existed on board of those vessels to a greater extent than on any other. In general, the percentage of deaths decreases in proportion as the number of passengers is less; and it is found that where passengers have been distributed in smaller numbers, disease and death have been less prevalent. The table (annexed to the report) shows that the smallest percentage of deaths has occurred on vessels from ports of Europe other than those of Liverpool, London, Bremen, Hamburg, and Havre, which, being out of the great thoroughfares of commerce, have presented fewer attractions to the great mass of emigrants. The vessels from these ports, being less crowded, are more easily ventilated and kept clean, and present greater facilities for the proper preparation of the food of the passengers, and for their exercise in good weather."

The means by which the occurrence of disease and the consequent destruction of life among the passengers on board of emigrant vessels may be obviated are sufficiently evident. By a proper apportionment of the number of the passengers to the available accommodations afforded by each ship; by excluding from on board persons already diseased, and all foul and infectious baggage, as well as all individuals who are in a condition strongly predisposed to an attack of any contagious malady and liable to propagate it among the entire ship's company, in connection with the strict enforcement of a proper system of nautical hygiene throughout the voyage, the ratio of sickness and of deaths on board of emigrant vessels would be reduced even below that of the communities at home from which come the major portion of the emigrants to this country.

But while all who have paid any attention to the subject must be convinced as to the means best adapted to preserve the health and lives of emigrant passengers, there stands in the way of carrying these means into effect an almost insuperable obstacle. The enactment of the most precise and stringent regulations by the Congress of the United States would not be sufficient; the accomplishment of the important object aimed at by such regulations could not be attained unless they were legalized and enforced in every port in Europe where the embarkation of emigrants to this country takes place.

"The great difficulty," says the report before us, "of preparing a general law which shall embrace in its operation all the minute points involved in the management of passenger ships, and effectively place the passenger and ship owner on the best possible footing, must present itself to every mind. In the first place, our country being the general receptacle of emigrants from almost every country of Europe, it becomes necessary so to legislate as to avoid coming into conflict with the legislation of the countries whence these people come, and, at the same time, protect their interests and the interests of American citizens at home and abroad. Great Britain, France, the various nations of Germany, the Hanseatic cities, have all of them their passenger laws, in which they prescribe

the terms upon which those who emigrate from among them shall be conveyed across the ocean. These laws or regulations include not only the equipment and nautical management of the ships engaged in this trade, but also prescribe such dietary provisions as to their makers respectively appear essential to the health and comfort of passengers. To legislate in this country, therefore, so as not to come in conflict with these foreign enactments on some of the many minute points which present themselves in the treatment of such a subject, requires an extent and accuracy of information on details difficult to attain, and would involve a minuteness and variety of legislative enactments suited to the local requirements of each country, whence emigrants seek a home on our shores, and liable to become oppressive whenever a change of policy suggests a change in those foreign enactments. It is, of course, the intention of every law-maker, that the laws passed by him shall be enforced; and to place enactments on the statute book which cannot be carried into effect without subjecting those who are governed by them to difficulty and annoyance from foreign countries, is worse than useless. That such a state at present exists, under the passenger laws now in force, has been proved by experience; and those engaged in the transportation of passengers do not hesitate to say, that the laws under which they are acting are in many respects impracticable, unless at great expense and loss to the American ship-owner. It is only necessary to allude to one case of the kind by way of illustration. The acts of Congress require that every passenger ship shall be furnished with provisions of a certain description to a given amount. An American ship goes to Bremen or Hamburg, and there takes on board a cargo of passengers. The laws of those cities require that all passenger ships sailing from them with passengers shall be supplied with a prescribed amount of certain provisions, which are specified. Now, in order to comply with the regulation of the port whence he sails for America, the American captain must provide a supply of the articles required by the local law, and, at the same time, to comply with the law of his own country, he must be provided with the food called for by the act of Congress. This single case involves a double expense in the provisions made for the subsistence of passengers."

To obviate the difficulty above referred to, the Committee have endeavoured to frame a law which shall, in its general operation, provide for the safety and comfort of passengers, and, at the same time, leave the management of minute details in the hands of those whose interest as well as business it is to be thoroughly acquainted with them. They consider it to be utterly impossible for Congress to know what is required to make each ship comfortable and healthy. Thus, one vessel may be ventilated and made perfectly wholesome for passengers by a process which, in another vessel, and under different circumstances, would be totally inadequate. The Committee have, therefore, believed it best to leave the means by which ships are made safe and comfortable mainly at the disposal of their owners; and, at the same time, to make these responsible for any untoward results that may attend the administration of their own affairs.

The Committee refer to a report on Quarantine, presented to the British Parliament, in 1849, in which the subject of the means for preventing sickness and death on board of passenger vessels are elaborately discussed. The Commissioners by whom this report was drawn up, Lords Carlisle and Ashby, and Edwin Chadwick and T. Southwood Smith, remark that, "the experience of the mercantile navy itself affords an example of the successful working of a large preventive principle of jurisprudence; that is to say, the principle of concentrating responsibility on those who have a direct interest in prevention, and who possess the best means of securing it." We would request attention to those examples for international consideration."

The report referred to then goes on to say:—

"It is stated that when the system of transportation was first adopted in some of the earlier voyages, full one-half of those who embarked were lost; later, on the passage to New South Wales, as in the 'Hillsborough,' out of three hundred and six who embarked one hundred were lost; and in another ship, the 'Atlas,' out of one hundred and seventy-five embarked sixty-one were

lost. Yet there were no omissions palpable to common observation, or which could be distinctly proved as matter of crimination to which responsibility might be attached. The shippers were, no doubt, honourable men, chargeable with no conscious designs against the lives of the human beings committed to their care, and with no unusual omissions; but their thoughts were directed, by their interests, exclusively to profits; they got as much freight as they could, and they saw no reason why convicts or emigrants should not put up with temporary inconveniences to make room for cargo.

"By a simple change—based on the principle of self-interest, the most general, uniform, and, when properly directed, really beneficent of all principles of action—by the short alteration of the terms of the contract, so as to apply the motive where alone there was the effectual means of prevention, by engaging *to pay for those landed alive*, instead of paying for *all those embarked*, these extreme horrors were arrested; the generation of extensive mortal epidemics was, in a short time, prevented, and clean bills of health might have been given to all the ships which before would have been entitled to none. From the report of the select committee on transportation, in the year 1812, it appears that in one period, namely, from 1795 to 1801, out of three thousand eight hundred and thirty-three convicts embarked three hundred and eighty-five died, being nearly one in ten. But, since 1801, after the principle of responsibility began to be applied, out of two thousand three hundred and ninety-eight embarked only fifty-two have died, being one in forty-six. The improvement has continued up to the present time, when it amounts to only one and a half per cent., or even lower than the average mortality of such a class living on shore. The shippers themselves, without any legislative provisions, or any official supervision or regulations thereto, appointed medical officers or surgeons, and put the whole of the convicts under their charge; the shippers attested their own sense of the propriety, sound policy, and efficiency of the principle, by voluntarily adopting it and applying it to each ship-surgeon in charge, whose remuneration was made dependent upon the number of passengers landed alive."

The same principle, we are told, has been adopted in contracts for the transportation of troops, and found to operate equally well; also to the transportation of pauper emigrants, with a like result; and the authors of the report to Parliament think the adoption of it will become general in the transportation of passengers, as it puts an end to all the difficulties occurring between the passengers and the officers of the ship, who are, of course, disposed to remain on the best of terms with those whom they carry.

"Why, then," asks the committee whose report is before us, "cannot or should not this principle of self-interest, as universal as the existence of man, be adopted in the transportation of passengers generally? As the law stood formerly, wages could not be demanded in case of shipwreck; and even now it must be made to appear that every effort has been made by the officers and crew to save the ship, before a claim for wages can be sustained."

"Is there any sufficient reason why similar responsibility should not be thrown upon those who have the entire management of the ship and the means of keeping it in proper condition? Should merchandise be on a better footing than human life? And if there be any propriety or justice in the old-common law maxim, that freight was the mother of wages, why should not the safe delivery of the passengers at the port of destination be the foundation of any claim for passage-money? The committee can see none, and have therefore adopted the principle, and regarded it as, perhaps, the most important feature in the bill which they recommend to be enacted into a law. If they are not very much mistaken, the change here made in the relation between the shipper and the passenger will bring about an entirely new era in the history of passenger-ships; as it will be the interest of shippers to land their passengers in safety, so it will be their pleasure to provide their ships with whatever may be necessary to make them healthy and comfortable. Nor will there hereafter be the same carelessness in taking enfeebled, broken-down, or diseased passengers on board, as has heretofore existed; shippers will be cautious in seeing, at all events, that the individual, of whose life during the passage he is to become virtually the insurer, is not labouring under serious sickness at the time of embarkation."

The adoption of this principle will further have a most powerful influence in creating a rivalry between ships as to which is the cleanest and healthiest; passengers will always prefer those which have the reputation of being the most lucky, or, in other words, the cleanest, best managed, and affording the greatest comfort to those who embark in them. Nor will the ventilation, disinfection, &c. of these vessels hereafter require the interference of Congress; each ship-master will be as desirous to have his ship sweet, wholesome, and pleasant in its arrangements, as the hotel-keeper who desires to attract patronage by the superior neatness, cleanliness, and good order of his establishment. The owners of steamers on the noble rivers of our country, and stage-coaches on its great thoroughfares, require no legislation in regard to the spaciousness and airiness of their apartments, or the good driving and safety of construction of the other, simply because self-interest dictates to them the comfort and security of the travelling public as the best means to secure custom. So will it be with the owners of passenger-vessels when left to themselves; and they will provide for the health and comfort of the poor emigrant as well as of the millionaire, because, in doing so, they will protect their purses and their own interests."

The following is an outline of the measures recommended by the committee, after a careful examination of the subjects committed to their consideration:—

1. That a space be reserved on the upper deck, and kept clear, for the enjoyment of air and exercise by the passengers. If space cannot be allowed for the accommodation of all the passengers at once, they to be divided into squads, and take their exercise in turn at certain hours of each day should the weather permit. The committee very correctly remark, that, "nothing is more conducive to the cure of sea-sickness, and the preservation of the strength and good spirits of passengers at sea, than the necessity of moving about and becoming interested in what is going on around them. At the same time, the temporary absence of passengers from the sleeping apartments will afford an opportunity for cleansing them, and removing whatever may be offensive or injurious to health."

2. That the former limitation of two passengers to every five tons register be restored, but without diminishing the space allowed under the present law to each passenger, to prevent the crowding, that now takes place, of vast numbers in any one ship.

3. That during the winter the number of passengers be limited to one for every three tons, as the inclemency of the weather and consequent necessity of keeping the hatches closed obstruct ventilation, and prevent the passengers from taking exercise in the open air.

4. That no passengers be allowed to occupy the orlop deck, which, lying next the keelson, and entirely under water, must, it is very evident, be almost entirely deprived of air and light.

5. That the number of privies be increased, with separate ones for the females. As the committee remark, the present allowance of one to every hundred passengers, is totally inadequate. "Common decency would seem to indicate the propriety, or rather necessity, of having separate accommodations for females, whose health and comfort are often destroyed by the fear of exposure to the brutal remarks of the vulgar and obscene among the male passengers and the crew."

6. That, from the entire impossibility of hundreds of people, some of them feeble from sickness, doing their cooking in a proper manner, at a cabin four feet by one and a half in size, the provisions be cooked as well as furnished by the ship.

7. That, with a view to confer upon the captain ample power to maintain discipline, without being subject, as at present, to vexatious prosecutions, certain rules be adopted and published throughout the ship, the observance of which to be enforced by the master in case of resistance to his proper orders and authority; a statement of the facts to be entered at the time on the log, and signed by the surgeon—if any be on board—and mate, and read to the offender. The statement so made to be *prima facie* evidence of justification in all suits or complaints brought against him, or against any who aid in carrying out his orders.

8. That the ship be made responsible to the extent of the passage-money, in the event of death during the passage.

9. That a full and accurate return be made of the names and descriptions of passengers, and of the deaths on board.

These regulations, so far as they go, appear perfectly judicious, and, with the requirement that in every case the shipper shall become virtually the insurer of the passenger's life during the voyage, would no doubt be sufficient to put a stop to the excessive amount of sickness and mortality which has heretofore prevailed on board the majority of the emigrant vessels arriving in the ports of the United States.

This able report, drawn up, we believe, by the Hon. HAMILTON FISH, of New York, is in the highest degree creditable to the industry, intelligence, and philanthropy of this eminent statesman, and it is to be hoped that Congress will, at the earliest opportunity, carry out the measures recommended.

D. F. C.

ART. XIII.—*Puerperal Fever, as a Private Pestilence.* By OLIVER WENDELL HOLMES, M. D., Parkman Professor of Anatomy and Physiology in Harvard University. 8vo. pp. 60. Boston, 1855. Ticknor & Fields.
On the Induction of Puerperal Fever, by Inoculation, so called. By Z. FITCHER, M. D. Published at the request of the Detroit Medical Society. Peninsular Journal of Medicine for February, 1855.

THAT puerperal fever, so called, is not, strictly speaking, a disease peculiar to the parturient female; that, under circumstances, of by no means unfrequent occurrence, an affection, attended by the same general symptoms, and in which, after death, the same morbid lesions are found to exist, is liable to occur in the virgin and non-pregnant female, are positions now so well established that they can scarcely admit of a reasonable doubt.

The close relationship between puerperal fever and erysipelas is another fact we believe to be clearly and incontestably proved. As remarked, long since, by Dr. Gordon, of Aberdeen, the two diseases prevail, most generally, as concomitant epidemics. They begin at nearly the same time, keep pace with each other, and cease simultaneously, or nearly so. It would require more space than it would be convenient to devote to a single bibliographical notice to present even a brief abstract of the clear and positive evidence in support of this position, accumulated in the records of our profession.

There is still another fact in relation to this disease which appears to us to be as unquestionably established, as either of the preceding; namely, that puerperal fever may be induced by the introduction into the vagina or uterus, during or subsequent to parturition, by the hands of the accoucheur, a virus derived from patients affected with erysipelas, or from the bodies of those who have died of that disease or of erysipelas.

We are inclined to believe that another fact may be predicated of erysipelas and puerperal fever; namely, that both diseases are propagated by contagion; and that the two are capable of reciprocally producing each other. It is true, that the contagious character of erysipelas and puerperal fever is by no means so positively established as either of the preceding positions. When a disease, as is most commonly the case with both these, prevails as an epidemic or endemic, it is not always an easy matter to determine, with certainty, whether its spread is due to the general morbid condition of the atmosphere, which unquestionably prevails at the time, or to a poison, received either directly or indirectly, from the bodies of the sick. Still, there are on record a long series of well-authenticated facts which would seem very certainly to establish the contagiousness of both the diseases under consideration, and many have fallen under our own immediate observation in reference to the spread of childbed fever which, we confess, we should find very difficult to explain in a satisfactory manner without admitting the contagious character of the disease.

Dr. Holmes has collected and arranged all the leading facts in proof of this